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ABSTRACT

A study was conducted to determine the need for bilingual vocational education and the extent bilingual vocational education programs are being implemented throughout the state of Colorado. Specific objectives were (1) to assess jobs that would be addressed through traditional vocational programs in Colorado which require bilingual employees now and in the future: (2) to assess all bilingual vocational education programs offered in Colorado regarding the type and adequacy of training as well as perform a follow-up of graduates involved in vocational training: and (3) to formulate recommendations concerning bilingual occupational programs based on objectives 1 and 2. To accomplish these objectives, six activities were completed, including a collection of data from existing files, a Delphi study, a survey of vocational programs, employer interviews, case studies, and a task force review. Some of the findings indicated that the majority of the jobs requiring bilingualism were in the professions (particularly teaching and social welfare) and in the service industries. Ten vocational education programs in Colorado were identified as having some bilingual characteristics: however, a follow-up revealed that only two of these programs might be considered bilingual vocational education programs. Finally, it was recommended that bilingual vocational education be defined as those programs that provide training for limited English-speaking students for employment in traditional and non-traditional occupational settings. (Specific findings for each objective are included.)
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BILINGUAL VOCATIONAL EDUCATION:

AN ASSESSMENT OF NEEDS

Final Report

Project Director:
Dr. Kendrick L. Spooner

Center for Education
And Management, Inc.

November 1979

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ABSTRACT

Bilingual Vocational Education Programs

INTRODUCTION

The federal legislation for vocational education addresses bilingual vocational education throughout its rules and regulations. The State Board for Community Colleges and Occupational Education has taken as part of its responsibility the implementation of bilingual vocational education in Colorado. As a first step, the Board has commissioned a study to determine the need for bilingual vocational education and the extent bilingual vocational education programs are already being implemented throughout the state. A brochure has been developed to provide information about bilingual vocational education regarding what it is and how a program may be implemented.

DEFINITION

The survey of local directors and CETA prime sponsors, completed by the State Board, identified that there were several definitions for bilingual vocational education at the local level. However, the definition as stated in the federal rules and regulations for bilingual education is quite clear. The rules and regulations state that "bilingual vocational education means training or re-training in which instruction is presented in both the English language and the dominant language of the person receiving training and which is conducted as part of a program designed to prepare individuals of limited English-speaking ability for gainful employment as semi-skilled or skilled workers or technical or sub-professionals in recognized occupations and in new and emerging occupations . . . ." Federal regulations provide that at least

20% of the monies allocated in Section 102(a) be allocated to disadvantaged persons other than handicapped and vocational education for persons with limited English-speaking ability.

BILINGUAL VOCATIONAL EDUCATION PROGRAMS
FINDINGS AND RECOMMENDATIONS

A task force was formed to develop an outline for a prototype program for bilingual vocational education programs. The following are recommended components that should be part of bilingual vocational education programs.

Skilled Training

Several agencies could be responsible for training in terms of skilled training for the limited English-speaking client. Secondary and post-secondary schools supervised by the State Board for Community Colleges and Occupational Education, proprietary schools, community based organizations, and CETA are prime candidates for delivering skilled training.

Advisory Committees

An advisory committee is an essential part of any program. It was further stated by the Task Force that bilingual representation be evident on the advisory committees.

Job Development

Job development and placement are an essential component for bilingual vocational education. This component should include career counseling, coordination with community organizations to work with placement problems,

job development, and personal assistance from teachers and instructors within the programs.

English as a Second Language and Adult Basic Education

Most individuals needing bilingual vocational education are deficient not only in English skills, but also in many of the basic education skills such as mathematics. Further, the research found that in order to place an individual in a semi-skilled or technical job, he or she must have enough English skills to complete the job interview process and to communicate with fellow workers.

Non-Educational Support Services

A bilingual vocational education program should include coordination of non-educational support services such as transportation, child care, medical care and financial aid when needed.

Student and Program Evaluation

Any bilingual education program should have a student and program evaluation component that will provide adequate information for decision-making. This evaluation should include student follow-up and achievement information.

Program Taught in Two Languages

The best approach for teaching a program in two languages is to employ a bilingual instructor. However, when there are not enough limited English-speaking students available for a project-sized effort, then bilingual teacher aides should be employed to address problems of language. Tutorial

assistance should be provided in order for the student with limited English to comprehend the technical language necessary for the occupation. In many instances, there are no literal equivalents for technical terminology in the client's language.

Staff Development

Any effort to implement bilingual vocational education must be accompanied by a staff development effort. This effort should include an orientation of staff to language and cultural differences of the students. It also should provide suggestions for instructional approaches that may be used to overcome the difficulties.

Bilingual Curriculum and Instructional Material

A bilingual vocational education program should be supported by bilingual materials or materials that are written in the student's predominant language. At present some of these materials exist through federally-funded exemplary bilingual vocational education programs.

ASSISTANCE IN IMPLEMENTING BILINGUAL PROGRAMS

The major source of technical assistance at the state level is through the State Supervisor of Special Programs. The state is allowed to expend a percentage of federal monies on bilingual vocational education programs. Subpart 5 of the Vocational Education Act provides for bilingual vocational training programs, bilingual vocational instructor training programs, and a bilingual vocational program of instructional materials, methods and techniques.

ACKNOWLEDGMENTS

Most research that provides meaningful results involves the efforts of many individuals. This project is typical. The Project Director wishes to thank Consultants Dr. Don Chaloupka, Mr. Tom Milan, Mr. Ray Rodriguez, and Dr. Carmen Timiraos for their valuable contributions. The Project Director appreciates the significant contributions of Task Force Review Members Dr. Stan Lancaster, Mr. Paul May, Dr. Rudy Muniz, Mr. Armando Quiroz, and Dr. John Runkle. The director is grateful for the cooperation of individuals completing the Delphi Study (whose names are set out in Appendix A) and the vocational administrators responding to the survey. Finally, the Director appreciates the cooperation of staff of the Boulder Valley Vo-Tech School and the Colorado Springs School District, who made it possible to describe some bilingual vocational education activities currently underway.

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Chapter I

Introduction

A current trend in America is to support cultural diversity. The Federal Government has sponsored many programs to assist social and educational institutions in adjusting their programs to meet the multi-lingual and accompanying multi-cultural demands.

The Colorado State Board for Community Colleges and Occupational Education sponsored the Bilingual Vocational Education Need Project in order 1) to assess jobs that would be addressed through traditional vocational programs which require bilingual employees now and in the future; 2) to assess all bilingual vocational education programs offered in Colorado regarding the type and adequacy of training; and 3) to formulate recommendations concerning bilingual occupational programs using the information obtained in achieving objectives A and B of this proposal. The purpose of this study was to assess the need for and suggest strategies for addressing bilingual vocational education.

Objectives

Three objectives define the scope of work of the research. Each objective is further defined in terms of a series of questions. The objectives and related questions are listed below.

Objective A

To assess jobs that would be addressed through traditional vocational programs in Colorado which require bilingual employees now and in the future.

1) What types of jobs require bilingual employees?

2) What types of job settings require bilingual employees?

3) What geographical areas have the highest demand for bilingual employees?

4) What languages are required for bilingual jobs?

5) What are the age levels of the average bilingual job holders?

6) What types of education and training are needed for bilingual employment situations?

7) What is the history of jobs requiring bilingualism?

8) What are the future projections of need for employees with bilingual skills?

9) What opportunities are there for advancement for employees in jobs requiring bilingualism?

Objective B

To assess all bilingual vocational education programs offered in Colorado regarding the type and adequacy of training as well as a follow-up of graduates involved in vocational training.

1) What vocational education programs are currently being offered which are bilingual?

2) How many instructors are bilingual?

3) In what ways are students in bilingual vocational education programs followed up?

4) What do current bilingual vocational programs look like?

5) What types of vocational education programs attract bilingual students?

6) Do the LEAs have a process for identifying occupations needing bilingual employees?

7) Is VE instruction offered in more than one language?

8) What support services are available for bilingual vocational education programs?

Objective C

To formulate recommendations concerning bilingual occupational programs using the information obtained in achieving objectives A and B of this proposal.

It was found that the initial purpose for the study had to be expanded in that a clear definition of bilingual vocational education did not exist. In order to establish need, it was necessary to resolve the definitional problem. The Approach section will detail the processes used for the development of a definition.

To accomplish the research objectives, six activities were completed: 1) collection of data from existing files, 2) a Delphi study, 3) a survey of vocational programs, 4) employer interviews, 5) case studies, and 6) a Task Force review. These activities relate to one or more of the objectives stated earlier.

The first objective required two major activities: first, a review of the state employment data to establish bilingual requirements for jobs listed four to five years ago and for jobs listed this year; second, a survey of several employers.

The second objective was addressed through a survey of the VE 115 and VE 120 records to identify bilingual instructors and bilingual programs. A mailed survey was conducted of all known occupational training programs (public, private, CETA, local agencies, etc.) to identify and describe existing bilingual occupational training programs. Case studies were done for two programs identified as being bilingual vocational education programs.

The third objective was addressed by a Task Force made up of individuals from agencies, programs, or businesses impacted by the bilingual movement. The Task Force met and reviewed the research findings and made

recommendations for bilingual vocational education. Members of the Task Force were as follows: Stan Lancaster, Local Director of the Boulder Vo-Tech Center; Paul May, Supervisor for Special Needs, State Board for Community Colleges and Occupational Education; Rudy Muniz, Director, Division of Elementary and Secondary Education, Bilingual Education Department of the U.S. Office of Education; Armando Quiroz, Colorado State Employment & Training Service; and John Runkle, Regional Commissioner of Educational Programs, U.S. Office of Education.

Chapter II

Results

The results of the research efforts are presented in this chapter. Each data collection strategy and the corresponding data are presented. Instruments and related support material are included in the Appendix. This presentation of the data breaks with the normal convention in that each research strategy is dealt with in a mini report fashion, with procedure, summary presentation of the findings and conclusions presented for each activity. With this in mind, the researcher responsible for the research and the development of the report will be cited.

Delphi Study - Don Chaloupka

The study involved polling a panel of twenty experts (names are in Appendix A) to gain input and answers for six questions.

1) What are the major characteristics that describe a bilingual vocational program?

2) What educational support services (student, program, administrative, etc.) are needed for bilingual vocational programs that are not needed for traditional programs?

3) What type of delivery system(s) will best meet the need(s) for bilingual vocational education programs?

4) What are the major factors one should consider in determining the need for a bilingual vocational program?

5) In what Colorado vocational education programs or occupational training programs will bilingual education need to be implemented in the next five years?

6) What types of jobs requiring bilingual skills do you think will be available in the next two years?

The study was conducted in three rounds of questionnaires, as follows:

1) In Round One, the participants were asked to respond to six open-ended questions. The responses to these questions were reduced to generic statements by a work group of researchers.

2) In Round Two, the second questionnaire fed back to the Delphi participants the generic statements and requested a rating of importance or appropriateness. The ratings were summarized by the researcher.

3) In Round Three, each participant received his ratings from Round Two, the average rating and majority range for all responses. Participants were asked to reconsider their original rating in light of the group average and if their rating was outside the majority to give a statement of justification. The data and comments were summarized.

The results and questions for rounds One and Two are in Appendix A along with the questionnaires for Round Three. The summary for Round Three follows.

Each question is stated; the responses are given in rank order of ratings; and then comments are listed after each item. The number in parentheses indicates the level of the respondent's rating to the item. This rating is outside the average range of responses for the item. The results of the study are summarized in the following pages. In summary, the survey results indicate a need for bilingual instruction in high demand occupational areas. Also, there is a need for support services to aid the limited English-speaking student in completing a vocational education program.

I. What are the major characteristics that describe a bilingual vocational program?

Category — Major Characteristics

1.	Instructors able to speak two languages	4.1
2.	Small class size	4.0
3.	Individualized instruction	3.9
4.	Students have basic language other than English	3.9
5.	Extensive follow-up services	3.8
6.	Interpreter available	3.7
7.	Have pre-vocational or "readiness programs"	3.6
8.	Instruction in more than one language	3.6
9.	Students capable in two languages	3.4
10.	Same as traditional programs	3.0

ITEM NUMBER	*COMMENTS*	*RATING*
1.	*This forces student to use dominant language.*	*(2)*
2.	*Definition of small class size is messy.*	*(2)*
4.	*Should serve all students.*	*(2)*
5.	*Rating what I thought it should be.*	*(5)*
	Follow-up necessary for accountability.	*(5)*
6.	*Availability of interpreter is critical.*	*(5)*
	If bilingual instructor -- why interpreter?	*(5)*
7.	*Readiness o.k. -- Pre-vocational questionable.*	*(2)*
8.	*They must compete for jobs where one language is used.*	*(2)*
	Assumes individual instruction.	*(3)*
9.	*Student must use English in work to succeed.*	*(1)*
	Desirable but not mandatory if good instructor.	*(2)*
10.	*Vocational Education is too satisfied -- lazy -- traditional programs are weak.*	*(2)*

I. What are the major characteristics that describe a bilingual vocational program?

Category — Instructional Format

1.	Emphasize communication skills	4.5
2.	Utilize "hands-on" approach	4.5
3.	Job survival component	4.2
4.	Utilize simulation approach	3.9
5.	Local social/cultural aspects given consideration	3.9
6.	English as a second language component	3.8
7.	Materials printed in two languages	3.6
8.	Students mainstreamed	3.6
9.	Equipment/materials have "no language" aspect	2.9

ITEM NUMBER	*COMMENTS*	*RATING*
4.	*Why?? Simulation is not necessary.*	*(2)*
5.	*Unsure of emphasis.*	*(3)*
7.	*Translation not always possible.*	*(2)*
	Student must learn English. This forces him to learn English.	*(1)*
	Same is true. They must be able to compete in our social structure. They limit their employability by only using one language.	*(2)*
8.	*If we are going to, let's do it.*	*(5)*
9.	*Not realistic. What is "no language"?*	*(2)*
	Instruction on operation of equipment must have language aspect . . . . Materials, unless totally universally symbolic also must have language aspect.	*(1)*
	I don't recall what this means.	*(2)*

I. What are the major characteristics that describe a bilingual vocational program?

Category — Administration

1.	Open exit	4.3
2.	Pre-assessment of realistic expectation of employment	4.3
3.	Student support component	4.3
4.	Open entry	4.2
5.	Job placement services	4.2
6.	Strong cooperative component	4.2
7.	Advisory committee	4.2
8.	Good publicity program	4.1
9.	Open night/day/weekends	3.6
10.	Free or minimal cost	3.4

ITEM NUMBER	*COMMENTS*	*RATING*
1.	*Not that important.*	*(3)*
	Not convinced it always works.	*(3)*
2.	*Is prediction that accurate?*	*(3)*
3.	*Agree to change to (4).*	*(2)*
4.	*Not that important.*	*(3)*
	Too much individualized instruction required. Not a totally effective method of instruction.	*(3)*
6.	*Agree to change to (4).*	*(2)*
8.	*Not necessary for success.*	*(3)*
	Publicity is best generated by a good program.	*(3)*
9.	*Availability is important.*	*(5)*
	Not enough time.	*(1)*
10.	*If free, not appreciated.*	*(1)*

II. What educational support services (student, program, administrative, etc.) are needed for bilingual vocational programs that are not needed for traditional programs?

1.	In-service program for staff	4.6
2.	Bilingual, professional counseling	4.3
3.	Bilingual tutorial services	4.2
4.	Bilingual interpreter	4.1
5.	Financial aid available	4.0
6.	Minority extraction instructors	4.0
7.	Language testing	4.0
8.	English as a second language teachers/ language instruction	3.9
9.	Child care services	3.9
10.	Assistance in completing forms	3.9
11.	All materials in two languages	3.8
12.	Transportation for students	3.8
13.	Housing assistance	3.7
14.	Parent/family liaison workers	3.6
15.	Income maintenance	3.6
16.	Teacher aides	3.6
17.	Relocation assistance	3.4
18.	Same as traditional program	2.9
19.	Phone in reservations	2.5
20.	All materials in "non-English"	2.4

ITEM NUMBER	*COMMENTS*	*RATING*
1.	*I would agree with the norm.*	*(3)*
	Staff development is vital.	*(5)*
	Few staff have total understanding of program.	*(5)*

ITEM NUMBER	COMMENTS	RATING
1.	Staff need additional training to understand needs of students.	(5)
	In-service is very important.	(5)
3.	Should be available.	(3)
	This type student needs extra help.	(5)
	Tutorial services are very important.	(5)
4.	No change.	(3)
5.	Not always necessary.	(3)
6.	Qualifications more important than minority.	(3)
	Not necessary for success.	(3)
8.	Vocational teachers normally don't have the expertise to teach language.	(5)
10.	Simplify forms (4).	(5)
11.	At least in early stages of program.	(5)
	Should be based upon need.	(2)
	Reading skills should be emphasized.	(4)
	They should learn both verbal and written communication.	(2)
	Agree to change to (2).	(4)
	In two languages or non-English to build the bridge to English - each in a language the student learns the best.	(5)
12.	Must be able to attend program.	(5)
14.	Many problems stem from home problems.	(5)
	Student must do it.	(1)
	High priority.	(5)
17.	Other agencies can handle better.	(2)
18.	If traditional programs had adequate support services for language, would we need anything other than a traditional program?	(1)

III. What type of delivery systems will best meet the needs for bilingual vocational education programs?

1.	Systems for job survival skills	4.6
2.	Help with communication skills	4.6
3.	Community based "real world" experiences	4.5
4.	Support students' self-esteem/pride	4.5
5.	Tutorial services	4.4
6.	Competency based exit	4.4
7.	Job placement program	4.4
8.	Individualized instruction	4.3
9.	Involvement/commitment by local business/community	4.3
10.	Support learning with local culture	4.2
11.	Bilingual instructors	4.1
12.	Take program to people	4.1
13.	Parent involvement	3.9
14.	Students contract for "X" competencies	3.8
15.	Same as all vocational programs	3.2

ITEM NUMBER	*COMMENTS*	*RATING*
8.	*Not always the best.*	*(3)*
9.	*O.K. but not necessary.*	*(3)*
10.	*Legal?*	*(3)*
11.	*Not as important as those with excellent understanding of program. Misread question. O.K. to change to (4).*	*(3)*
13.	*A must -- many problems come from home.*	*(5)*
	Student must be responsible.	*(3)*

ITEM NUMBER	COMMENTS	RATING
14.	Those "X" competencies must constitute a salable job skill.	(2)
	Give students better chance for successful experiences.	(5)
15.	This delivery system must use those cultural factors that enhance learning and use other aspects of the culture to enhance learning and self image.	(1)
	Why different?	(5)
	Alternate system must be developed.	(1)
	Different program would upset students.	(5)

IV. What are the major factors one should consider in determining the need for a bilingual vocational program?

1.	Jobs for students	4.7
2.	Students available who could profit from program	4.6
3.	Assess student needs	4.5
4.	Attitudes of school staff and teachers	4.3
5.	Attitudes of local employers	4.2
6.	Mobility of students	4.1
7.	Bilingual instructors	4.0
8.	Cultural differences	3.9
9.	Do other bilingual programs exist	3.8
10.	Drop-out rate	3.6

ITEM NUMBER	*COMMENTS*	*RATING*
3.	*Should not be criterion in determining need.*	*(3)*
4.	*Should not be major factor.*	*(3)*
	Can our graduates get jobs using the learned skills in the area they want to work?	*(3)*
5.	*If local employers don't believe in program, it won't go. Can be overcome.*	*(3)*
6.	*Underestimated by most programs.*	*(5)*
7.	*Should not be criterion in determining need.*	*(3)*
8.	*What effect does 8 or 9 have on starting a program? The other factors determine the need.*	*(2)*
	Agree to change to (4).	
9.	*Should not be criterion in determining need.*	*(1)*
10.	*This will be high unless we have good counseling, good rate models, and bilingual teachers.*	*(1)*
	Need to start programs earlier.	*(5)*
	May be a good indicator of direction program should be taking.	*(5)*
	Should not be criterion in determining need.	*(2)*

7. In what Colorado vocational education programs or occupational training programs will bilingual education need to be implemented in the next five years?

1.	Oil/energy development	4.6
2.	Building trades	4.4
3.	Hospitality/food careers	4.4
4.	Health/medical careers	4.4
5.	T & I	4.2
6.	Recreation	4.1
7.	Business and office education	4.1
8.	Geriatric aides	4.1
9.	Data systems	3.9
10.	Legal aides	3.9
11.	Auto body work	3.8
12.	Any special localized need	3.8
13.	Agriculture	3.8
14.	Auto mechanics	3.7
15.	Environmental assessment	3.7
16.	Home economics	3.6
17.	Transportation specialists	3.6
18.	Indo-Chinese programs	3.4
19.	Prepare students for life, not specific jobs	2.8

ITEM NUMBER	*COMMENTS*	*RATING*
1.	*Why bilingual?*	*(3)*
6.	*Bilingual not criteria.*	*(2)*
8.	*Bilingual not criteria.*	*(2)*
9.	*Bilingual not criteria.*	*(2)*

ITEM NUMBER	COMMENTS	RATING
10.	Bilingual not criteria.	(2)
12.	We must consider student mobility.	(1)
	Should be the main criterion.	(5)
13.	A low pay dead end job unless you own the farm.	
14.	A moratorium on now in Colorado.	(2)
	Most areas already overloaded, i.e. auto mechanic trainees.	(2)
15.	Bilingual not criteria.	(2)
	Bilingual aspects not that significant.	
17.	Bilingual not criteria.	(2)
	If we are talking taxi and bus drivers, maybe.	(2)
	Bilingual aspects that significant?	(2)
18.	Huge need now, won't diminish in next 5 years.	(5)
	How important -- I don't know.	(1)
19.	Life goes on -- jobs change.	(5)

VI. What types of jobs requiring bilingual skills do you think will be available in the next two years?

1.	Energy-related/coal, uranium	4.3
2.	Health/social services	4.3
3.	Oil industry technicians	4.2
4.	Bilingual teaching	4.1
5.	Travel/airport	4.0
6.	Social services	4.0
7.	Interpreters	4.0
8.	Electronics	4.0
9.	Mining	4.0
10.	Office jobs/secretarial	3.9
11.	Service jobs (clerical, sales, marketing)	3.9
12.	Foreman/supervisor	3.9
13.	Transportation	3.9
14.	Immigration/customs	3.8
15.	Counseling	3.8
16.	Heavy equipment maintenance	3.7
17.	Teaching	3.7
18.	Computer programming/data processing	3.7
19.	Agricultural	3.6
20.	Accounting/banking	3.6
21.	Recreation	3.6
22.	Welding	3.6
23.	Municipal government	3.5
24.	Electro/mechanical	3.5
25.	Plumbing/steam fitting	3.5
26.	Telephone operators	3.3

27.	Cultural awareness	3.1
28.	Psychology	3.1
29.	Soil conservation	3.1

ITEM NUMBER	*COMMENTS*	*RATING*
1.	*Will change mind to (4).*	*(3)*
	Will not require bilingual skills.	*(2)*
3.	*Why bilingual?*	*(2)*
4.	*Not sure of emphasis.*	*(3)*
7.	*Already a great need and it won't diminish.*	*(5)*
	Key to many programs.	*(5)*
9.	*Will change mind to (4).*	*(2)*
12.	*Depends upon level. Need more but I don't see it happening.*	*(2)*
14.	*Great need for more bilingual in this area.*	*(5)*
15.	*Most effective counselors are those who know ethnic customs.*	*(5)*
16.	*I don't understand need for bilingual requirement.*	*(1)*
19.	*At low pay -- dead end -- They can get low level skills O-J-T.*	*(2)*
23.	*Depends on level. Need more but I don't see it happening.*	*(2)*
25.	*No way because of unions' apprentice requirements.*	*(2)*
27.	*Not role of bilingual/bicultural.*	*(1)*
	Don't know what jobs these are.	*(2)*

GENERAL COMMENTS

1. *Some persons feel that since the need for jobs in these areas will be great, that bilingual skills will be required. I do not feel this is the case.*

2. *Bilingual education is unpopular and government institutions are not truly convinced for the most part.*

3. *The bilingual/bicultural must address and provide for new careers, not dead-end jobs, jobs that pay low wages, offer little if any hope. The core of the training program is the ability of the student to deal with the complexities in the system. They don't read or write well enough to understand the implications of their choice or see the implications 1-5 years down the road.*

The information gained through the Delphi Study helped clarify bilingual vocational education in terms of who it should serve, its major program characteristics, and what vocational program areas have the best potential for bilingual development.

Program Survey - Tom Milan

This survey was a part of the overall research plan to identify the need for and the types of programs necessary to institute a bilingual vocational education program in Colorado. A questionnaire (Appendix B) was sent to all vocational education administrators in the state of Colorado. This included administrators from junior or community colleges, secondary schools, proprietary schools, and CETA prime sponsors. Of the 154 questionnaires mailed, 88 were returned for a response rate of 57%. The following is a summary of the information provided by these administrators.

Table 1 indicates that there were 10 prime sponsors, 26 area vocational school administrators, 17 proprietary school administrators, 18 community college administrators and 27 local school district administrators responding to the questionnaire. There were some cases in which an administrator represented more than one entity, such as an area vocational school and a junior or community college. Consequently, the total sum of responses indicated in the tables is 98 versus the 88 questionnaires returned. The responses for those administrators with dual roles were counted twice, once for each type of institution. It can be seen in Table 1 that the primary definition provided by the administrators for bilingual vocational education programs was providing English as a

TABLE 1

Discriptors For Bilingual Program

Groups	Total Number	Instruction in two Languages		Curriculum & Text in 2 Languages		Students Required To take 2nd Language		Placement in Job Requiring Bilin-gualism		Provide English As a 2nd Language Instruc-tion		Language Tutors For Students With Limited English		Interpreter For Class-room Instruction	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
CETA Prime Sponsors	10	6	60.0	5	50.0	1	10.0	1	10.0	8	80.0	4	40.0	4	40.0
Area Vocational Schools	26	16	61.5	12	46.2	2	7.7	2	7.7	12	46.2	11	42.3	6	23.1
Proprietary Schools	17	7	41.2	6	35.3	0	0	0	0	2	11.8	1	5.9	1	5.9
Community Colleges	18	10	55.6	9	50.0	3	16.7	3	16.7	12	66.7	11	61.1	3	16.7
Local School Districts	27	12	44.4	8	29.6	2	7.4	5	18.5	16	59.3	12	44.4	7	25.9
Totals	98		48.8		37.2		9.3		8.1		51.2		37.2		22.1

second language (ESL) to supplement current programming. There were, however, a significant number of administrators who felt a bilingual vocational program should have a bilingual instructor and also should have curriculum and text materials in two languages. Also, the aid of cutors for students with limited English-speaking skills was seen as helpful. Very few of the administrators felt that bilingual vocational education programs required students to take two languages or had an objective of placing graduates in a job requiring bilingualism. The administrators felt that the primary type of student attracted to a bilingual program was a student with limited English-speaking ability or no English-speaking ability. A summary of these responses is provided in Table 2.

When asked what are the major barriers to implementing bilingual education, the administrators felt that the lack of bilingual teachers, bilingual curriculum material and bilingual teacher aides or tutors were primary barriers. There were some school districts that indicated there were not enough students interested in a bilingual program to make it cost effective. Also, it was indicated that there was a lack of funds for bilingual program development.

It was found that 39.5% of all the administrators felt there was a need for bilingual vocational education, while 40% of all administrators felt there was no need for bilingual vocational education programs. Twelve percent of the administrators did not respond to this question. Administrators established the need for bilingual education programs through two sources: 1) contact through the CETA prime sponsors and job service centers; and 2) a survey of local needs. Other schools have indicated that the need is implicit in terms of the type of students enrolled in the program, that is, students needing English as a second language instruction.

TABLE 2

Types of Students Attracted
To Bilingual Programs

Groups	Types of Students							
	Speak Only English		Speak English As A Second Language		Speak Two Languages Well		Does Not Speak English	
CETA Prime Sponsors	2	20.0	5	50.0	2	20.0	10	100.0
Area Vocational Schools	0	0	13	50.0	1	3.8	16	61.5
Proprietary Schools	2	11.8	8	47.1	3	17.6	6	35.3
Community Colleges	0	0	12	66.7	1	5.6	12	66.7
Local School Districts	7	25.9	11	40.7	4	14.8	11	40.7
Totals		14.0		48.8		12.8		54.7

Also, it was mentioned several times that the Indo-Chinese or Vietnamese refugee programs were used to identify needs for bilingual programs.

There were ten schools identified that offered some type of bilingual education program. Table 3 summarizes the service areas impacted through these programs. It appears that trade-industrial occupations have the highest number of students receiving bilingual vocational instruction in Colorado. For the most part, these programs were identified as supplemental services provided to students in a regular class and included English as a second language instruction.

The survey identified bilingual vocational education programs presently in force in Colorado as primarily supplying graduates for the same types of jobs as any other program. Occupational areas requiring bilingual skills were identified as airlines, hotel/motel management, restaurants, community assistance agencies and some secretarial positions. One program trained individuals to work with the deaf.

When asked what types of student services were needed to support a bilingual vocational education program, the need stated most often was for counseling. Other needs indicated were in the areas of tutoring, supplemental services, library resources, interpreters, instructional staff with bilingual competencies, transportation, a career orientation program, orientation to the American culture, support staff having bilingual skills, and an English as a second language instructional program.

The types of programs which attract bilingual students were varied. Examples given were business and office, allied health, public service fields, drafting, electronics, distributive education, and auto mechanics. From the comments, it would appear that there is no predominant preference

TABLE 3

Schools Offering Bilingual
Vocational Education Programs

GROUPS	AREAS						
	Agriculture	Trade & Industrial	Distributive Education	Business & Office	Technical	Health	Home Economics
CETA Prime Sponsors	0	0	0	0	0	0	0
Area Vocational Schools	0	2	1	1	2	1	1
Proprietary Schools	1	1	0	0	0	0	0
Community Colleges	0	1	0	0	0	0	0
Local School Districts	0	1	1	1	1	1	1
Totals	1	5	2	2	3	2	2

of bilingual clients for a particular occupational area.

The primary means used to follow-up bilingual vocational education program graduates was the Colorado Vocational Management Information System. Students who were placed through the CETA programs were followed up by the CETA counselors.

The administrators were asked at what level bilingual vocational education should provide training. Table 4 indicates that a majority of the administrators felt vocational education should meet both entry level and upward mobility concerns for all students.

Summary and Conclusions

This section is intended to go beyond the data in an effort to identify the implications of the findings. The data primarily indicates the lack of understanding, and fails to convey the problems or the solutions related to the issues in bilingual vocational education. It is felt that the responses indicate a lack of agreement on "what is bilingual vocational education." There appear to be three definitions for this concept: 1) bilingual vocational education is supplemental services offered to individuals in regular vocational education programs having problems with language skills; 2) bilingual vocational education provides training for individuals seeking employment in a bilingual environment (jobs requiring bilingual skills); and 3) bilingual vocational education programs are taught in a primary language other than English.

Six out of ten prime sponsors stated there was a need for bilingual vocational education. From the numbers of bilingual students served by vocational education and the number of students with limited English-speaking ability in secondary schools, it is apparent that large groups of

TABLE 4

Level At Which Bilingual Programs
Should Provide Training

GROUPS	LEVEL OF TRAINING					
	Entry Level		Upward Mobility		Both	
CETA Prime Sponsors	3	30.0	1	10.0	5	50.0
Area Vocational Schools	12	46.2	4	15.4	9	34.6
Proprietary Schools	2	11.8	1	5.9	6	35.3
Community Colleges	6	33.3	2	11.1	8	44.4
Local School Districts	6	22.2	3	11.1	14	51.9
Totals		26.7		12.8		45.3

linguistically different people are not presently enrolled in the secondary schools. Historically, students with limited English-speaking skills will start dropping out of school in the early grades and the rate of dropouts increases as the students get older. By the tenth grade, there are few "bilingual" students to be served. This same population will return for education either on a part time or full time basis at the post-secondary level. If vocational education at the secondary level is to impact this group of students, occupational awareness should begin in the earlier grades and may very well be part of a career education thrust aimed at improving the holding power of the local school districts. It is the goal of most boards of education to provide every child the opportunity to develop his or her potential to the highest degree and to develop skills that will enable them to become a productive and participating member of society. Vocational education can and has helped to meet this goal, but its ability to impact the "bilingual" student is limited by the high attrition of this population prior to their entry into the secondary school.

The research indicates that bilingual vocational education is a program without a portfolio and is treated as a concept with little or no structure. The criteria used to determine eligibility for students as well as program objectives are not clear and definite. Examples are the three definitions of bilingual vocational education cited earlier. Each definition would require different program objectives and supporting services. The lack of clarity of program definition may result from misunderstanding of the terms "vocational education" and "bilingual education" by persons assigned the responsibility to deliver vocational services and programs.

The funding pattern for bilingual vocational education programs may influence the direction schools will take in meeting this need. If the enrollment does not warrant starting a separate/parallel class, those students must be served in regular classes supported by supplemental programs. It is also apparent that geographic locations with high minority populations result in a greater demand for bilingual vocational education programs. It may be of interest to note that most of the requests for program services have come from two primary sources — that of Job Service Centers and CETA prime sponsors who deal with the majority of the non-English-speaking population. The students seem to need a basic ESL program prior to enrollment in a regular vocational program and reinforcement of basic skills after they have been admitted to a vocational training program.

As the educational system moves in the direction of minimal basic competencies, it may become easier to define and defend the type of programming needed to serve this population. The eventual marriage of CETA youth incentive programs and local education systems will lessen the communication barrier between [illegible] groups and more emphasis may be placed on retraining and upward mo[illegible] for limited English-speaking individuals. The majority of the trainin[illegible] programs seemed to center around the blue-collar occupations, where entry skill is very basic and advancement is slow.

In summation, it may well be the addition of supplemental services to regular vocational programs that provides the best opportunities for all people who have a language barrier. This, coupled with continued efforts in adult basic education outside the environmental context of "schools," appears to be needed in order for vocational education as a component to contribute to the upward mobility of this population. The implications are for closer coordination among the various agencies and staff responsible for

the above training and services.

Employment Service Job Order Survey - Ray Rodriguez

A review of the Colorado Division of Employment and Training job orders was completed as part of the Bilingual Needs Assessment. This review consisted of randomly selecting sets of microfiche and reviewing the job orders for those particular days. Job orders in the 1978 and 1979 years and in the 1974 and 1975 years were reviewed. The fiche reviewed were selected through a systematic, random sample in which the researcher chose a starting point and reviewed one set of fiche every thirty days thereafter for one year.

In total, 37,071 jobs were reviewed; of these, 152 (.4%) jobs were identified requiring bilingual skills. The languages specified were Spanish, French, German, Arabic, Chinese, Japanese, Italian, American Indian, Swedish, and Eskimo. Also, there were a number of jobs that identified a need for speaking English and a few jobs that specified that a person could be bilingual in English and any other language.

The bilingual job survey serves several research needs. One of its major purposes was to gather data which helped determine the types of jobs in the various labor markets that required bilingual skills. It was believed that the sample of job orders taken included adequate numbers to insure useful data in determining the types of jobs and occupations that required bilingual skills.

Secondary purposes of the survey were to examine education levels of jobs requiring bilingual skills and the geographic areas having some demand for these skills. The survey also helped identify the languages most in demand in the respective labor markets. A summary of the review of the 152 job orders follows.

TABLE 5

Jobs Requiring Bilingual Skills

Job Orders	Public Sector Jobs	Private Sector Jobs
1974 (9)	66%	34%
1975 (57)	53%	47%
1978 (35)	62%	38%
1979 (13)	16%	84%
114 TOTAL		

Primary Labor Market

Survey data shows that jobs requiring bilingual skills in the primary labor market are professional or paraprofessional (teachers, caseworkers, professors, auditors, counselors, nurses, safety aides, teacher aides) and require some college education and in most cases a degree in a specific area of study. The jobs required experience ranging from one year to five years in a specific occupation. The majority of these jobs were in the public sector of the economy and were usually in state institutions, school districts, county departments or city departments.

Secondary Labor Market

The secondary labor market jobs with bilingual requirements were found in the private sector and generally required a high school diploma or less. These jobs were primarily in the service and retail trade industry and required minimal skills (busboys, waiters, counter clerks, casual labor, janitors, laborers). Although these jobs were low entry, low skill, they still required experience ranging from three months to two years. The

TABLE 6

Education Required for Bilingual Jobs

	Below High School	High School Diploma	College Degree
1974			
Public Sector	16%	17%	67%
Private Sector	33%	67%	0%
1975			
Public Sector	13%	37%	50%
Private Sector	44%	56%	0%
1978			
Public Sector	8%	17%	75%
Private Sector	66%	26%	8%
1979			
Public Sector	0%	50%	50%
Private Sector	46%	36%	18%

secondary labor jobs were more dispersed throughout the state than the primary labor jobs. Age requirement was not a factor for employment in these jobs.

Summary

In summary, it was found that there was very little demand for individuals with bilingual skills in the Colorado labor market. It should be noted at this point that the job bank only represents approximately 5% of the total jobs available. Most jobs are offered through an informal word-of-mouth or selected recruiting system. To bolster the findings of this survey, an employer survey was conducted. The results of this effort are discussed in the next section.

The types of jobs requiring bilingual skills are in two distinctive labor markets and in two job categories. The first category is professional jobs which include teachers, counselors, caseworkers, professors, and nurses. The second category includes such low entry level jobs as janitors, waiters, laborers, counter clerks, etc.

The professional jobs which are in the public labor markets require degrees and have benefits, low turnover, higher wages, better working conditions and opportunities for advancement.

The low entry level jobs are in the private sector requiring minimal formal education and little or no skill. They offer low wages, high turnover, and poor working conditions, with little or no chance for advancement.

The number of jobs that could be addressed by vocational training is so small, having little or no demand, that systematic programming to address these labor demands does not seem appropriate.

Survey of Employment Possibilities for Individuals with Limited or No English-speaking Ability - Carmen Timiraos

As part of the Bilingual Needs Assessment Project, the researcher completed a survey of ten large businesses having potential jobs for individuals with limited English-speaking ability. The following companies were surveyed:

1. Colorado Fuel and Iron
   Pueblo, Colorado

2. Hewlett-Packard
   Colorado Springs, Colorado

3. Ampex Corporation
   Colorado Springs, Colorado

4. Western Electric Corporation
   Denver, Colorado

5. Adolph Coors Company
   Golden, Colorado

6. Samsonite
   Denver, Colorado

7. Gates Rubber Company
   Denver, Colorado

8. Mastercraft, Incorporated
   Denver, Colorado

9. Alpha Beta Pack Company, Incorporated
   Pueblo, Colorado

10. Master Builders, Division of Martin Marietta
    Denver, Colorado

The following questions were asked of each personnel director:

1. Do you employ people with limited or no English-speaking ability? If yes, at what level?

2. Are there opportunities for advancement?

3. How are your employees recruited?

4. Are there any special programs for your employees, i.e., English as a Second Language, On-the-Job Training, etc.?

5. Do you have any jobs within your organization that require bilingual skills?

The following are brief summaries of the interviews:

Colorado Fuel and Iron

Neither of the two persons to whom we were referred would return our calls. After several attempts, it was determined that this was a non-interview.

Alpha Beta Pack Company

The first person interviewed informed us that they had jobs for people with limited English-speaking ability. This person claimed not to be qualified to respond to the rest of the questions and referred us to another supervisor who was never available and would not return our calls.

Hewlett-Packard

The personnel administrator was extremely helpful in responding to our questions. They require a minimum reading and writing ability (for reading manuals, writing work orders, etc.). The advancement possibilities are good and depend on the employee's abilities. In addition to a regular educational program available to all employees, they provide an in-house English as a Second Language program, as needed. No bilingual jobs of any type were identified.

Ampex Corporation

They have jobs with no entry requirements. They provide an educational assistance program, but this program is not a requirement. Employees must

go on their own time. They claim to have had very good experiences with their limited English-speaking employees. Advancement on the job depends on the individual. No bilingual jobs of any type were identified.

Gates Rubber Company

They employ people with limited or no English-speaking ability at low level entry jobs. There are plenty of opportunities for advancement, limited only by the employee's own ability. At present, they employ mostly Indochinese and are very satisfied with them as workers. Their educational program is open to all employees but is not a requirement. Newspaper ads and other employees are primarily used in their employee recruitment efforts. No bilingual jobs of any type were identified.

Adolph Coors Company

A minimum of communication skills is required for employment. They give an entry test consisting of a twenty minute written numerical test and a five minute oral word recognition test. They accept applications all year and advertise for certain jobs as needed. They have bilingual positions in the personnel, employment, and sales departments. The interviewer was unable to find out which languages were required.

Advancement depends on the individual's performance. Advanced training is done on the job. They provide a regular education program, open to all employees. Attendance in this program is not required.

Western Electric Corporation

They employ non-English-speaking individuals at every level from laborers

to engineers. They have a tuition refund educational program, available to all employees. They advertise for jobs as needed. No bilingual jobs of any type were identified.

Samsonite

They require a minimum of communication skills in order to follow instructions. They conduct all their own training. There are good advancement opportunities, which are based on the individual's ability. They employ people from all language backgrounds. They have a secretarial position in the international division that requires the person to be bilingual.

Master Builders, Division of Martin Marietta

It was found that they were too small an employer to be part of the survey.

Mastercraft, Incorporated

They employ people, such as assemblers, with limited or non-English-speaking ability. Fifty per cent (50%) of their employees are monolingual in Spanish. Advancement depends on performance and ability to communicate. Their recruitment system is basically by word of mouth, with some advertising in the newspapers. They are planning to start an in-house English as a Second Language program. The staff in the personnel office must be bilingual. The main second language is Spanish. They are beginning to hire line supervisors who are able to speak Spanish.

There seems to be a small market for individuals who have limited English-speaking abilities. There is little chance for advancement unless

one has good communication skills. The survey results further indicated that there was little demand for individuals having bilingual skills.

Case Study: Boulder Valley Voc-Tech School Bilingual Vocational Education Program - Kendrick L. Spooner

The evaluation staff interviewed several administrators and teachers in the Boulder Valley School regarding their bilingual vocational education program. The program can be best described as a supplemental services program that prepares non-English or limited English-speaking individuals for entry into and successful completion of regular vocational education training programs.

The general flow of the program is that all students, particularly the Indochinese with limited or no English-speaking skills, must first be screened and if necessary complete an adult basic education program with emphasis in reading and speaking English. These students work in the program directed by the adult education supervisor. This program is operated in five levels (0 through 4) designed to address the individual's current ability to speak and read English. The fourth and final level of the program deals with technical vocabulary and terminology and prepares the student to deal with the "jargon" of a trade. It was felt that students going into technical programs needed a higher level of language ability than the students going to a direct job placement. In the fourth level there is some career exploration and guidance provided to the student to prepare him/her for either entry into the job market or the selection of a training program. The students are tested prior to their leaving the adult basic education program, to provide guidance information to counselors. These scores are provided to counselors of the Boulder Valley

Vo-Tech Center if the student is considering placement in a vocational program.

Once the referral is made, the INVEST Counselor handles the Vietnamese that are eligible for the program. Other financial aid is handled through the supervisor of supplemental services. The student is then referred to the counselor responsible for the program in which the student is interested. Once enrolled, the supervisor for supplemental services receives monthly progress reports on the student from the instructor. Other responsibilities of these support service areas are the orientation of instructors to the cultural, geographical and particular learning problems that might influence the student's learning style. Support services also provide tutors and have funding to pay for additional instruction for the students needing these services. If it is felt that the student needs additional basic education, the student can be referred back to the adult basic program and can take instruction through the program, concurrently, with his/her enrollment in the vocational education program. To date, the program has graduated ten of twelve INVEST students and an additional ten to fifteen Indochinese students not funded through the INVEST program. It has been observed that it takes the Indochinese student a little longer to complete the vocational program because of the language barriers. This observation was confirmed by one of the instructors who had extensive involvement with the Indochinese students in the machine trades. Her observation was that the students could not progress through the program at the same rate as their English-speaking peers.

The counselors stated that many of the students have problems selecting a program because they lack knowledge about the options available. One technique that has been used is to allow the student to

shadow the instructor of a particular program for a few days to get an idea of the types of activities associated with a particular trade. It was obvious through the interviews that the crux of the program was to provide the students with adequate English language skills so they might succeed in a regular classroom setting. It was also observed that the staff at the Boulder Valley School felt the Vietnamese students in the program needed additional assistance in order to successfully complete a vocational training program.

One instructor interviewed emphasized the need for the development of more instructional aides to assist in teaching the bilingual student. It was felt that these aides assisted in developing technical vocabulary necessary for the tradesman. Also, it was suggested that if a group of students could be put together in one trade, it would be easier to provide instruction because the instruction could be paced to their level and need.

The major descriptors of the program are: 1) a strong adult basic education program, 2) a guidance program that allows for career guidance and exploration, 3) a student monitoring and assistance component, and 4) a regular vocational education program providing the limited English-speaking student with an opportunity to obtain a trade or skill.

The program has been in existence for three years. The staff feel that at this time particular problems can be anticipated for particular trade areas. An example of this kind of problem follows. It was found that in studying for a required safety examination, the Vietnamese did not understand the fundamental concept of safety and, consequently, could not relate the content studied to anything relevant. Once this was understood by the instructional staff, steps were taken to help define the concept of safety, thereby eliminating the problem of passing the safety examination.

It was very apparent that the total effort was one of cooperation. There were strong channels of communication among all principals involved. It was the responsibility of the Support Services Coordinator to make the teacher aware of the resources available to them in dealing with and supplying instruction to the limited English-speaking student.

Site Visit: Colorado Springs - Kendrick L. Spooner

As part of the Bilingual Needs Assessment Project a site visit was conducted by the research staff. The visit consisted of a one day, on-site review of the adult education program at the Naval Reserve Center in Colorado Springs. It was found that the major objectives of the adult training center were English as a Second Language and adult basic education - GED training. This program serves approximately 400 students per year at an average cost of $100 per student per year. The English as a Second Language program consisted of three levels. Level One included students with no previous English-speaking experience, while Level Three included students working on conversational English skills. The staff felt that the ESL program did not provide sufficient training for an individual to enter into a technical program. It was felt that with the three levels of ESL training and the adult basic education - GED training that an individual could successfully enter a vocational education program however. Further, the professionals at the training center stated that to take an individual from zero through the completion of high school competencies program would take, on the average, two years.

The first class was with Level One students. These individuals were learning basic survival language. The objectives included learning to

respond to "who they were," "where they lived," etc. The Level Two class visited was involved with conversational language training. The vocabulary words were basic one and two-syllable words.

In interviewing the staff, it was found that there was little or no articulation between the adult basic education/ESL program and the area's vocational schools. It was found that the Pikes Peak Community College was starting its own ESL program. The staff at the RE-11 school district's program did not see the Pikes Peak program as being competitive or detrimental to their program. It was stated that within their existing budget, they were serving all the students they could possibly serve, and additional English language training was needed for their graduates. If students could affort to go to Pikes Peak Community College to obtain this additional instruction, it would be beneficial to the students.

The adult basic education program did have an INVEST component. The objectives for the adult basic education program, in light of the INVEST grant, were job counseling and job development. Instructors worked to obtain placement for their students. Other than the INVEST program, there was no guidance offered to students or follow-up of students once they left the program.

The program is funded 84% by Federal funds funneled through the State and 16% by local funds. There was concern expressed because it appears the funds for adult education are slowly drying up and the Center has been encouraged to obtain more local support for their program. The program served students from 17 different school districts in the Colorado Springs area. However, only one school district provided any support for the program. There appears to be little hope of gaining

additional local support. The staff stated there is a need for the ESL programs in the Colorado Springs area, in that over 8,000 individuals have been identified as being functionally illiterate and needing adult basic education.

Conclusion

One must ask at this time what do the ESL and adult basic education programs have to do with bilingual vocational education? The major tie between ESL/ABE and vocational education is that vocational education programs either funded through the State Board for Community Colleges and Occupational Education or sponsored by CETA and delivered by private and public institutions have a minimum entry level, literacy and basic education expectation. It would appear that individuals with a literacy and math level below eighth grade have a very poor chance of succeeding in a traditional vocational education program. When technical occupations are considered, the literacy and math levels must be much higher. In order for vocational education to address the linguistically different, programs must be offered to bring students to a level at which the content of technical education can be comprehended. The question of bilingual vocational education becomes a definitional problem. If bilingual vocational education is to serve individuals with limited English-speaking ability, then ESL and adult basic education are essential components in the total education program. If bilingual vocational education is to provide training for individuals wishing to obtain jobs requiring bilingualism, then the ESL and adult basic education programs are not needed.

If bilingual vocational education is to serve individuals that are linguistically different, a closer coordination between the ESL programs.

adult basic education programs, and vocational education programs needs to take place. There needs to be a series of transitional services that will allow the student to progress from level zero of ESL through a vocational training program, culminating in a successful job placement.

If bilingual vocational education is a remedial program that offers some supplemental services to aid those individuals who can't quite make it in the regular program, then the existing supplemental services program coupled with a traditional vocational education program may be all that is needed. If bilingual vocational education programs are taught in two or more languages and have curriculum materials in two or more languages, then, again, the adult basic education service has a limited role to play and the State must focus the resources on the development of bilingual materials and the recruitment and training of bilingual instructors.

Federal Program Review - Kendrick L. Spooner

To bolster the Case Studies, the researchers reviewed short descriptions of 22 federally-funded bilingual vocational education programs. Table 7 provides a summary of the findings.

It can be seen that the Federal programs have several formats. Some are taught in a language other than English; some provide English language training; while others seek to train individuals for jobs requiring bilingualism. These are the same three program formats that have emerged from the other studies.

The major source of assistance at the state level is through the State Supervisor of Special Programs. The State is required to expend a percentage of Federal monies on bilingual vocational education programs. Also, Public Law 94482 provides for programs to support bilingual vocational

TABLE 7

1976 Federally Funded Bilingual Projects

Instructional Objectives		Program Name	Instruction Provided In Native Language	Support Services	Counseling	Tutors	Trains For Bilingual Employment
Technical	English Language						
Small engine repair Welding House framing Electricity	X	Kuskokwim Community College, AK	X				
Agricultural occupations	X	Central Coast Counties Development Corporation, CA	X	ABE			
Clerical Health assistants Data processing	X	Community Care and Development Services, Inc.	X	ABE	X		
Machinist	X	San Francisco Community College Skills Center, CA		X		X	
Agricultural equipment operators		Solano County Schools, CA	X		X		
Dental assistant		University of California at Los Angeles, CA	(limited information)				
Gerontology assistant	X	Bangor Community College, ME		X		X	
Secretarial		New Mexico Highlands University, NM					X
Various trades	X	New Mexico Technical Vocational School, NM	X	ABE			
Power mechanics Arts and crafts Printing		Northern New Mexico Consortium for Rural Education, NM	(limited information)				

TABLE 7

1976 Federally Funded Bilingual Projects

(continued)

Instructional Objectives		Program Name	Instruction Provided In Native Language	Support Services	Counseling	Tutors	Trains for Bilingual Employment
Technical	English Language						
Printing	X	American Council for Emigres in the Professions, Inc., NY	X	X	X		
Mechanics	X	Borough of Manhattan Community College, NY		X			X
Construction trades	X	Bronx Community College, NY	X	ESL	X		
Chinese chefs	X	China Institute of America, NY	?	ESL			
Para legal Para accounting	X	China Manpower Project, Inc., NY	?	ESL/ cultural			
Health assistant Auto mechanics	X	Nassau County Vocational Education Extension Board, MY	X	ESL	X		
Mental health worker	X	Mary College, ND		ESL/Indian culture	(2 yr. A.A. degree program)		
Food services Auto mechanics	X	Canadian Valley Area Vo-Tech School, OK	X	ESL			
Printing Clerical	X	Crystal City Independent School District, TX	?	ABE	X		X
Various trades	X	El Paso Community College, TX		X	X		
Various trades	X	SER/Hidalgo Jobs for Progress, Inc., TX		ESL	X		1 program
Emergency medical technician	X	Texas Woman's University, TX		ESL			X

education. Subpart 5 of this act provides for bilingual vocational training programs, bilingual vocational instructor training programs, and bilingual vocational instructional materials, methods, and techniques programs. The following are the stated purposes of these programs. Further information may be obtained from Circular 45, published in the Federal Register Volume 42, Number 191, October 3, 1977. Application for the Federal programs are sent to the State Board for Community Colleges and Occupational Education and may be obtained from the State RCU Coordinator during the time of competitive grant process.

Bilingual Vocational Training Program: Section 105.601 Purpose.

The purpose of the bilingual vocational training program is to prepare persons of limited English-speaking ability to perform adequately in an environment requiring English language skills and to fill the critical need for more and better trained persons in occupational categories vital to both the persons and the economy. Funds available to the Commissioner pursuant to section 183 of the Act may be used for making grants or contracts for bilingual vocational training programs. (Sec. 181; 20 U.S.C. 2411; Conf. Rept. No. 94-1701, p. 228.)

Bilingual Vocational Instructor Training Program: Section 105.601 Purpose.

The purpose of the bilingual vocational instructor training program is to provide training programs to meet the critical shortage of instructors possessing both the job knowledge and skills and the dual language capabilities required for adequate instruction of persons handicapped by their limited English-speaking ability. Funds available to the Commissioner pursuant to section 183 of the Act may be used for making

grants or contracts for bilingual vocational instructor training programs. (Sec. 186; 20 U.S.C. 2416.)

Bilingual Vocational Instructional Materials, Methods, and Techniques Program: Section 105.621 Purpose.

The purpose of the bilingual vocational instructional materials, methods, and techniques program is to develop instructional materials and encourage research programs and demonstration projects to meet the critical shortage of such instructional materials suitable for bilingual vocational training programs. Funds available to the Commissioner pursuant to section 183 of the Act may be used for making grants or contracts for bilingual vocational instructional materials, methods, and techniques.

Task Force Review

The Task Force met to review the data collected and provide recommendations for Colorado bilingual vocational education programs. The research team made the following presentations:

Survey of Local Directors	Tom Milan
Employment Survey	Ray Rodriguez
Delphi Study	Don Chaloupka
Survey of Personnel Officers	Carmen Timiraos
Review of Case Studies And Other Related Information	Ken Spooner

The Task Force then reviewed and discussed the questions related to bilingual vocational education and made recommendations for Colorado

vocational education programs.

The discussion was directed to five questions. A nominal group process technique was used for structuring the work session. The following questions were considered:

1) What should be the major characteristic of bilingual vocational education for Colorado?

2) What should be the major program components for a bilingual vocational education program and who is responsible at the Federal, State and local level for each component?

3) Who are the major populations to be served by bilingual vocational education?

4) What is (are) the objective(s) of bilingual vocational education?

5) What policy issues are there for the SBCCOE to consider related to bilingual vocational education?

Question 1 - What should be the major characteristics of bilingual vocational education for Colorado?

The Task Force felt a joint planning process that included ESL, ABE, Vocational Education, Special Needs, Counseling, and Job Development was needed. The plan should include a strong needs assessment in order to align programs to manpower and students' needs, provide adequate student assistance, develop strong community support and be built on a commitment from state and local administrators. Each student in the program should have a specific occupational objective. It was felt that the total program must be promoted and supported by a staff development effort both at the pre-service and in-service levels.

Question 2 - What should be the major program components for a bilingual vocational education program and who is responsible at the

Federal, State and local levels for each component?

The Task Force identified ten important program components: skill training, advisory committees, job development and placement, ESL and ABE, student assessment, educational support services, staff development, tutorial assistance, student and program evaluation, and instruction provided in two languages.

The concept of "program" has been expanded beyond the narrow service area definition used for vocational programming. This approach was used in order not to limit activities, processes, or services that might impact bilingual vocational education. Also, the identified components implicitly defined bilingual vocational education as "a skill training program for limited English-speaking students for employment in training and non-traditional occupations." Each of the ten program areas will be listed, together with discussion.

Skill Training:

Each member of the Task Force felt that skill training was one of the major components of a bilingual vocational education program. It was felt this training could be provided by vocational education programs in the secondary and post-secondary schools, CETA program, proprietary schools, and community based organizations. The skill training did not necessarily have to be long term training in technical occupations; however, it should be made clear that technical occupations should not be excluded from consideration for bilingual vocational education programs.

Advisory Committee:

The Task Force felt that each bilingual vocational education program

should have an advisory committee. This committee could be the same as the craft committee for a secondary or post-secondary program. It was felt that this committee should be aware of the nature of a bilingual vocational education program and include representation from minority groups. It was emphasized by the Task Force that minority organizations should be involved in the development of bilingual vocational education programs.

Job Development and Placement:

It was felt that job development and placement were essential components for bilingual vocational education programs. These components should include career counseling and involve community organizations and instructors in the secondary and post-secondary institutions.

English as a Second Language and Adult Basic Education:

These components are unique to the bilingual vocational education program. In a regular vocational program, these activities generally would not be considered. It was felt that if a program were to be effective for bilingual individuals (those with limited English-speaking ability), then additional work needed to be done in the area of developing their English competencies and basic skills. It was felt that the individuals with major responsibility for the English language training and adult basic education were the program directors for the adult basic education programs. Presently, these programs are funded by Federal flow-through money with local matching funds. There was some concern expressed as to the future of Federal funding and the apparent lack of support for this program at the State and local level.

Student's Occupational Objectives:

It was felt that each student in the program should have an occupational objective compatible with the training offered and that the counselors have major responsibility to aid the student in selecting his/her objective. Further, it was felt that student assessment was part of this component and that adequate guidance must be provided to the student prior to his/her entering a particular skill training program.

Non-Educational Support Services:

This is the second component of the bilingual vocational education program that is not generally part of the traditional vocational education program. Non-educational support services might include transportation, child care, medical care, and financial aid as needed. It was felt that these services have been traditionally provided through Federal programs such as the Veteran's Bill and similar assistance programs. These support services can be provided also for those individuals who qualify through CETA or WIN programs.

Staff Development:

It was strongly urged that any bilingual vocational education program have a strong staff development effort. The staff development would include in-service training for the instructors and counselors in terms of instructional strategies geared to cultural and language differences of the various clients to be served. It was felt that the individuals mainly responsible for this task are the State Board for Community Colleges and Occupational Education Supervisors, approved vocational teacher education programs, and local administrators. Activities that should be considered

are the development of staff training packages to be utilized in the local school districts for training instructors, implementation of a bilingual in-service training program, and instructor, counselor and support services staff in-service training.

Tutorial Assistance:

Tutorial assistance is another component of the bilingual vocational education program that would not traditionally be found in a vocational program. It was felt that some students in a bilingual vocational education program would need additional assistance in order to keep up with the instructional pace. The State Board for Community Colleges and Occupational Education through its Special Need Supervisor does provide the resources necessary to support this program component; also, funds are available through the State Department of Education's Right to Read Program.

Student and Program Evaluation:

It was felt by the Task Force that evaluation was an important component in the offering of a bilingual vocational education program. The primary responsibility for this evaluation lies with the local education agency and the program funding source. The evaluation must be made in line with the program objectives.

Program Taught in Two Languages:

The Task Force felt this component is mandatory in order for a program to be considered bilingual. There was some discussion about the best means for providing dual language instruction for vocational education. It was agreed that the best method would be to employ a teacher

who could teach in both languages. However, there was some concern over the practicality of this method at present. Another alternative suggested was to provide instruction in both languages through the use of teacher aides or interpreters. Also, it was felt instruction must be complemented with bilingual material and there must be a strong awareness of the minority culture by the instructional staff. The Task Force felt the local educational agencies were primarily responsible for providing bilingual instruction. However, it was also stressed that teacher education and other agencies take a strong role in the identification and/or development of bilingual teachers.

It was felt that a graduate from a bilingual vocational program should have adequate English language ability to communicate about the job with peers and supervisors.

Question 3 - Who are the major populations to be served by bilingual vocational education?

The Task Force felt that the major populations to be served are individuals with limited English-speaking ability or individuals who are illiterate. It was felt that, for the Colorado area, the Mexican-American population has the largest number of individuals to be served and the Southeast Asian population has the second most pressing need.

Also, it was pointed out that many individuals with good speaking skills are limited in their reading and written communication skills. Many of these individuals are not from minority cultures. The bilingual program should offer them the same types of support services and English language development as the minority student with limited verbal skills.

Question 4 - What is the objective of bilingual vocational education?

It was quickly agreed by the Task Force members that the only objective for bilingual vocational education is the long term employment of the completor in a job related to his/her skill training.

Question 5 - What policy issues are there for the State Board for Community Colleges and Occupational Education to consider for bilingual vocational education for Colorado?

There were several concerns or issues listed by the Task Force that should receive consideration by the SBCCOE. The first and probably most important consideration was one of funding level and commitment for bilingual vocational education programs. It was felt that criteria need to be set for funding programs to serve limited English-speaking populations. It was hoped that commitments would be made to adequately fund program development and implementation.

A second consideration is one of philosophy and definition. The question who should be served and how should these individuals be served needs further discussion on the part of the State Board and its advisory committee.

A third concern was that the State Board needs to establish criteria for program approval and monitoring. It is felt that the initial outline of program characteristics suggested above should be considered as a format for developing specific program guidelines.

Another area of concern was to what extent public relation efforts should be extended in promoting bilingual vocational education and recruiting prospective students.

The Task Force was also concerned about the need for coordination and

cooperation with minority groups in the development of bilingual vocational education programs.

It was suggested that interagency agreements be considered as a means for implementing bilingual vocational education programs. These agreements would take place at the State and local levels and would involve, at the State level, CETA, community based organizations, the State Board for Community Colleges and Occupational Education, and the State Department of Education. At the local level, the agreements would involve community based organizations, the LEA and the CETA prime sponsor. These interagency agreements would address areas of responsibility and coordination in delivering a bilingual vocational education program. The content of this type of agreement needs to be developed from a general format developed by the SBCCOE for consideration by both State and local agencies. The processes should be implemented to insure coordination among agencies and within agencies in order to address objectives and provide services necessary for bilingual vocational education students. It was felt that interagency cooperation and agreements were the focal point for promoting and delivering successful bilingual vocational education programs.

Chapter III
Conclusions and Recommendations

In this chapter each objective will be stated and each defined question under that objective will be addressed. Second, a general statement of recommendation will be made for each objective.

Objective A

> To assess jobs that would be addressed through traditional vocational programs in Colorado which require bilingual employees now and in the future —

1) "What types of jobs require bilingual employees?"

It was found that there were two categories of jobs requiring bilingual employees. The first category included professional jobs, generally in the area of teaching and social welfare, in which bilingualism was important. These jobs are not addressed by vocational education; consequently, they cannot be considered as part of the job market for vocational education graduates. The second job category was the low entry level jobs, such as waiters, waitresses, and janitors. These required little or no skill training and consequently should not be used as an indication of demand for bilingual employees for vocational education. There were a small number of jobs in the area of secretarial, airline, and travel which required bilingualism and which could be addressed by vocational education programs; however, this segment was less than one-tenth of one percent of the total jobs surveyed through the employment data bank. There appears to be no need for vocational education programs to train individuals for jobs requiring bilingualism.

2) "What types of job settings require bilingual vocational education?"

The majority of the jobs requiring bilingualism were either in the professions (particularly teaching and social welfare) or in the service industries.

3) "What geographical areas have the highest demand for bilingual employees?"

It was found that the Denver area had the highest demand for bilingual employees, but, again, the demand was so small that even in the Denver area it could not be considered strong enough to deserve attention through focus programs.

4) "What languages were required for bilingual jobs?"

A multitude of languages were identified in the 152 jobs found in the Employment Service job file. The majority of jobs require Spanish as a second language; however, there were several jobs requiring German, French, Chinese and other languages. Sixteen languages were identified in the 152 jobs requiring bilingualism.

5) "What is the age level of the average bilingual job holder?"

It was found that age was not a requirement for bilingual jobs and that the age range varied widely.

6) "What type of education and training are needed for bilingual employment situations?"

Most professional jobs required four years of college. Entry level jobs had no specific educational requirement, although there was a work experience requirement for most jobs reviewed.

7) "What are the future projections for need of employees with bilingual skills?"

A review of the employment over five years indicates that there will be no significant increase in the demand for bilingual employees in the near future. There was little demand five years ago and there is still little demand. If this trend continues, it would seem unlikely that more than one-half of one percent of the Colorado job market would require employees with bilingual skills. At present, this demand is taken care of by utilizing bilingual individuals already employed as interpreters in an informal assignment.

8) "What opportunities are there for employee advancement in jobs requiring bilingualism?"

It was found through the employer survey that very few jobs actually require bilingualism and promotions were based upon one's ability. This seemed to exclude any preference for bilingualism. It was noted that most employers utilized a bilingual individual as an interpreter when needed and, consequently, employers generally do not hire an individual specifically because they are bilingual.

Objective B

To assess all bilingual vocational education programs offered in Colorado regarding the type and adequacy of training as well as the follow-up of graduates of vocational training programs —

1) "What vocational education programs are currently being offered which are bilingual?"

Ten vocational education programs in Colorado were identified as having some bilingual characteristics. However, a follow-up of these programs

indicated only two programs might be considered as bilingual vocational education programs, and those were not specifically designed to meet that need. These programs had an ESL and ABE component tied to a vocational education program through the Special Needs Coordinator. These programs did not offer vocational education instruction in a second language. The other programs identified were ESL and/or ABE with no tie, formal or informal, with vocational education.

2) "How many credentialed vocational education instructors are bilingual?"

Through searching the data base at the State Board for Community Colleges and Occupational Education, 27 instructors were identified as having bilingual skills. While some names were missing from the list of 3,500 credentialed instructors, the percentage having bilingual skills was found to be very small. A majority of these instructors teach in the Denver area and have Spanish as a second language.

3) "In what way are students in bilingual vocational programs followed up?"

It was found that all students are followed up in the same manner, using the VEDs Student Follow-up Form supplied by the State Board for Community Colleges and Occupational Education.

4) "What is the nature of current bilingual educational programs?"

The case study completed by the researcher indicates that current bilingual vocational education programs are a cooperative effort between ESL, ABE and vocational education. This cooperation and coordination involves the counselor, Special Needs Coordinator, instructors, and the directors of ESL and ABE programs.

5) "What types of vocational education programs attract bilingual students?"

It was found that no particular type of program seemed to be most attractive to limited English-speaking students. It was found that higher level technical trades were more difficult to enter for individuals with limited English ability because of higher language requirements.

6) "Do LEAs have a process for identifying occupations needing bilingual employees?"

It was found that most LEAs utilized a needs assessment process based upon employment demands. This system is not different from the process used to identify needs in any occupational program area.

7) "Is vocational education instruction offered in more than one language?"

There were no cases found in Colorado in which instruction was offered in more than one language. This finding was based upon a survey of all vocational education programs, CETA programs, and proprietary schools in the State. Of 22 Federally funded programs in other states, nine programs clearly offered instruction in a language other than English.

8) "What support services are available to bilingual vocational education programs?"

It was found that ESL and ABE programs worked in support of bilingual vocational education. Also, through CETA, WIN, and INVEST certain support services could be provided to students such as child care, transportation, medical expenses and financial aid. Individuals qualifying for other welfare programs could receive some of these services. The Vocational Education Special Needs Program provided tutorial assistance and some aid to

instructors for bilingual vocational education programs. Also, the INVEST program for the Southeast Asians was available to supply support for their clients.

Objective C

To formulate recommendations concerning bilingual occupational programs using the information obtained in achieving Objectives A and B of this proposal —

It is the recommendation of the research group that bilingual vocational education be defined as those programs that provide training for limited English-speaking students for employment in traditional and non-traditional occupational settings. This definition is consistent with Public Law 94-482. This program must include basic education, English as a Second Language, and vocational education special needs components. Further, it is felt that for the program to be truly effective, instruction must be provided in two languages. This will expedite the instructional process and achieve a higher degree of understanding about the occupation for the limited English-speaking student.

It is assumed in this approach that students have a higher degree of literacy in their native language. Some concern was expressed as to the validity of this assumption, based upon the findings of the Secretary of State's office in their follow-up of utilization of bilingual ballots.

It is necessary for these students to develop an English language capability that will allow them to function in a market place. The data has indicated that there is limited employment opportunity for individuals with little English communication skills. In general, only low entry level jobs are available to those who speak no English, and there appears to be

limited advancement for the individuals employed.

Consequently, the skill training must be coupled with language training so that a bilingual vocational education program has a dual objective: first, training for a skill; second, providing adequate English language skills so that employment may be obtained and maintained. It is felt that because of the multiplicity of services required for the limited English-speaking client, the delivery system should be developed through interagency agreements at the State level and the delivery of the program can best be implemented through interagency agreement at the local level. The agencies to be involved at the State level should be CETA, the State Board for Community Colleges and Occupational Education, Social Services, the State Department of Education, and prominent community based organizations, particularly those that represent the ethnic minority being served. At the local level, the local educational agency, the CETA prime sponsor, the welfare agencies and community based organizations should be included in a cooperative arrangement for delivering vocational education programs.

There are strong implications for the teacher education institutions in light of the development of in-service and pre-service instruction for staff development in the area of bilingual vocational education and for curriculum development primarily in Spanish to help augment the instruction for bilingual vocational education. Also, material should be developed for instructors which describes the culture of the minority group, thus bringing about a cultural awareness on the part of the instructional and support staff at the local level.

Little can be done in the area of bilingual vocational education without a strong commitment from several State agencies. English as a

Second Language and Adult Basic Education must be delivered to potential clients for bilingual vocational education. There must be an effort to deliver vocational education in two languages so as to speed up the training process. It was found in the case studies that individuals currently going through a program take from three to four years to complete the program because they must develop English ability before going into the vocational education program. It is felt that by providing the program in dual languages and working on the language objectives simultaneously with the occupational objective that the time frame for the program can be reduced and a better trained individual delivered to the job market.

APPENDIX A

Delphi Group

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February 13, 1979

Dear Participant:

Enclosed is the first questionnaire of the Bilingual Vocational Education Delphi Study in which you agreed to participate.

As I may have indicated in our telephone conversation, the purpose of the research is to give the State Board for Community Colleges and Occupational Education (SBCCOE) data on which to formulate policy for bilingual vocational education. Other components of the research will be (1) a review of employment data, (2) a survey of vocational programs, and (3) the development of case studies. The information from the research will be presented to a vocational bilingual education Task Force to generate recommendations for the SBCCOE.

The questions for the first round are completely open-ended. You are encouraged to list as many responses as you wish for each question. We are seeking your opinions and best professional judgments. You should communicate what in your view should be within the context of bilingual vocational education. Another way of looking at the response to this questionnaire is to "brainstorm" ideas. Do not provide the rationale for any of your responses.

In later rounds, all responses will be summarized and fed back to the participants. A brief description of the Delphi procedures is enclosed for your information.

We will need to identify you on each questionnaire so that we can provide you with feedback. Your responses will be kept anonymous.

This is an important study; its results will impact vocational education's posture for bilingual vocational education. The Delphi Study results will be incomplete unless you complete all phases of the survey. We are working with a very small number of professionals (approximately 20), so if even one individual does not respond, it could have a marked effect on the outcome.

Thank you for agreeing to participate in the study. I will be happy to answer questions related to the process being used and provide you with a copy of the final report upon request.

Sincerely,

Kendrick L. Spooner, Evaluator

KS:ldm
Enclosure

Directions: Would you respond to each question from your Professional view point.

Name_____

What are the major characteristics that describe a bilingual vocational program?

What Educational support services (student, program, administrative etc.) are needed for bilingual vocational programs that are not needed for traditional programs?

What type of delivery systems will best meet the needs for bilingual vocational education programs?

What are the major factors one should consider in determining the need for a bilingual vocational program?

In what Colorado vocational education programs or occupational training programs will bilingual education need to be implemented in the next five years?

What types of jobs requiring bilingual skills do you think will be available within the next two years?

5 = Strongly Agree
4 = Agree
3 = Undecided
2 = Disagree
1 = Strongly Disagree

I. What are the major characteristics that describe a bilingual vocational program?

Category—Major Characteristics	Circle your choice				
	SA	A	U	D	SD
1. Instructors able to speak two languages	5	4	3	2	1
2. Same as traditional programs	5	4	3	2	1
3. Individualized instruction	5	4	3	2	1
4. Instruction in more than one language	5	4	3	2	1
5. Students have basic language other than English	5	4	3	2	1
6. Have pre-vocational or "readiness programs"	5	4	3	2	1
7. Interpreter available	5	4	3	2	1
8. Small class size	5	4	3	2	1
9. Extensive follow-up services	5	4	3	2	1
10. Students capable in two languages	5	4	3	2	1
Category—Instructional Format					
11. Materials printed in two languages	5	4	3	2	1
12. Emphasize communication skills	5	4	3	2	1
13. E.S.L. component	5	4	3	2	1
14. Job survival component	5	4	3	2	1
15. Utilize simulation approach	5	4	3	2	1
16. Utilize "hands on" approach	5	4	3	2	1
17. Students mainstreamed	5	4	3	2	1
18. Equipment/materials have "no language" aspect	5	4	3	2	1
19. Local social/cultural aspects given consideration	5	4	3	2	1
Category—Administration					
20. Open entry	5	4	3	2	1
21. Open exit	5	4	3	2	1
22. Pre-assessment of realistic expectation of employment	5	4	3	2	1
23. Job placement services	5	4	3	2	1
24. Strong cooperative component	5	4	3	2	1
25. Student support component	5	4	3	2	1
26. Advisory committee	5	4	3	2	1
27. Open night/day/weekends	5	4	3	2	1
28. Free or minimal cost	5	4	3	2	1
29. Good publicity program	5	4	3	2	1

Add any new items here:

II. What educational support services (student, program, administrative, etc.) are needed for bilingual vocational programs that are not needed for traditional programs?

		SA	A	U	D	SD
1.	All materials in two languages	5	4	3	2	1
2.	All materials in "non-English"	5	4	3	2	1
3.	E.S.L. teachers/language instruction	5	4	3	2	1
4.	Bilingual, professional counseling	5	4	3	2	1
5.	Parent/family liaison workers	5	4	3	2	1
6.	Same as traditional programs	5	4	3	2	1
7.	Financial aid available	5	4	3	2	1
8.	Child care services	5	4	3	2	1
9.	Income maintenance	5	4	3	2	1
10.	Housing assistance	5	4	3	2	1
11.	Relocation assistance	5	4	3	2	1
12.	Bilingual tutorial services	5	4	3	2	1
13.	Minority extraction instructors	5	4	3	2	1
14.	Inservice program for staff	5	4	3	2	1
15.	Bilingual interpreter	5	4	3	2	1
16.	Transportation for students	5	4	3	2	1
17.	Teacher aides	5	4	3	2	1
18.	Phone in reservations	5	4	3	2	1
19.	Assistance in completing forms	5	4	3	2	1
20.	Language testing	5	4	3	2	1

Add any new items here:

III. What type of delivery systems will best meet the needs for bilingual vocational education programs?

1.	Same as all vocational programs	5	4	3	2	1
2.	Bilingual instructors	5	4	3	2	1
3.	Individualized instruction	5	4	3	2	1
4.	Systems for job survival skills	5	4	3	2	1
5.	Tutorial services	5	4	3	2	1
6.	Community based "real world" experiences	5	4	3	2	1
7.	Involvement/commitment by local business/community	5	4	3	2	1
8.	Competency based exit	5	4	3	2	1

	SA	A	U	D	SD
9. Students contract for "X" competencies	5	4	3	2	1
10. Job placement program	5	4	3	2	1
11. Help with communication skills	5	4	3	2	1
12. Parent involvement	5	4	3	2	1
13. Take program to people	5	4	3	2	1
14. Support students' self-esteem/pride	5	4	3	2	1
15. Support learning with local culture	5	4	3	2	1

Add any new items here:

IV. What are the major factors one should consider in determining the need for a bilingual vocational program?

1. Students available who could profit from program	5	4	3	2	1
2. Jobs for students	5	4	3	2	1
3. Bilingual instructors	5	4	3	2	1
4. Attitudes of local employers	5	4	3	2	1
5. Attitudes of school staff and teachers	5	4	3	2	1
6. Culture differences	5	4	3	2	1
7. Mobility of students	5	4	3	2	1
8. Do other bilingual programs exist	5	4	3	2	1
9. Drop-out rate	5	4	3	2	1
10. Assess student needs	5	4	3	2	1

Add any new items here:

V. In what Colorado vocational education programs or occupational training programs will bilingual education need to be implemented in the next five years?

1. Agriculture	5	4	3	2	1
2. Building trades	5	4	3	2	1
3. Auto mechanics	5	4	3	2	1
4. Auto body work	5	4	3	2	1
5. Oil/energy development	5	4	3	2	1
6. Any special localized need	5	4	3	2	1
7. Indo-Chinese programs	5	4	3	2	1
8. Data systems	5	4	3	2	1
9. Health/medical careers	5	4	3	2	1
10. Recreation	5	4	3	2	1
11. Hospitality/food careers	5	4	3	2	1

		SA	A	U	D	SD
12.	T & I	5	4	3	2	1
13.	Business office education	5	4	3	2	1
14.	Home economics	5	4	3	2	1
15.	Legal aids	5	4	3	2	1
16.	Geriatric aids	5	4	3	2	1
17.	Transportation specialists	5	4	3	2	1
18.	Environmental assessment	5	4	3	2	1
19.	Prepare students for life, not specific jobs	5	4	3	2	1

Add any new items here:

VI. What types of jobs requiring bilingual skills do you think will be available within the next two years?

1.	Heavy equipment maintenance	5	4	3	2	1
2.	Agricultural	5	4	3	2	1
3.	Bilingual teaching	5	4	3	2	1
4.	Oil industry technicians	5	4	3	2	1
5.	Immigration/customs	5	4	3	2	1
6.	Cultural awareness	5	4	3	2	1
7.	Office jobs/secretarial	5	4	3	2	1
8.	Service jobs (clerical, sales, marketing)	5	4	3	2	1
9.	Energy-related/coal, uranium	5	4	3	2	1
10.	Health/social services	5	4	3	2	1
11.	Travel/airport	5	4	3	2	1
12.	Social services	5	4	3	2	1
13.	Counseling	5	4	3	2	1
14.	Municipal government	5	4	3	2	1
15.	Teaching	5	4	3	2	1
16.	Foreman/supervisor	5	4	3	2	1
17.	Interpreters	5	4	3	2	1
18.	Computer programming/data processing	5	4	3	2	1
19.	Accounting/banking	5	4	3	2	1
20.	Electronics	5	4	3	2	1
21.	Telephone operators	5	4	3	2	1
22.	Transportation	5	4	3	2	1
23.	Electro/mechanical	5	4	3	2	1
24.	Plumbing/steam fitting	5	4	3	2	1
25.	Psychology	5	4	3	2	1

	SA	A	U	D	SD
26. Recreation	5	4	3	2	1
27. Welding	5	4	3	2	1
28. Soil conservation	5	4	3	2	1
29. Mining	5	4	3	2	1

Add any new items here:

BILINGUAL VOCATIONAL EDUCATIONAL SURVEY

DIRECTIONS: On the following pages you will find all of the statements you have previously rated. Following the statement, the mean (average) rating of all respondents is indicated. Following this figure is the five point scale on which a majority range of scores is indicated by a shaded area. Your score on round two is circled in red. When the circled score is outside the shaded area, action on your part is needed. When the circled score is within the shaded area, no action on your part is needed. For each circled score outside the shaded area you have two choices. One, change your score to the shaded area, or two, leave your score where it is. In either case, we would like you to share your thinking about the items. Two examples follow:

		MEAN SCORE					
EXAMPLE:	1. Instructors are able to speak two languages.	4.1	[5	4	3]	2	(1)

(In this illustration you could change your rating to 5,4 or 3 by circling your choice, or leave it at 1. In the space to the right of the rating scale, provide a short statement of your current feeling concerning the item.

EXAMPLE:	2. Students capable in two languages.	3.4	5	[4	(3)]	2	1

(In this illustration no action is required unless you change your response outside the shaded area, because your original choice was within the majority range of scores.

I. What are the major characteristics that describe a bilingual vocational program?

		MEAN SCORE	YOUR PREVIOUS CHOICE ○ MAJORITY RANGE [ ] SA	A	U	D	SD	COMMENTS
Category--Major Characteristics								
1.	Instructors able to speak two languages	4.1	[5	4	3]	2	1	
2.	Same as traditional programs	3.0	5	[4	3	2]	1	
3.	Individualized instruction	3.9	[5	4	3]	2	1	
4.	Instruction in more than one language	3.6	[5	4	3]	2	1	
5.	Students have basic language other than English	3.9	[5	4	3]	2	1	
6.	Have pre-vocational or "readiness programs"	3.6	[5	4	3]	2	1	
7.	Interpreter available	3.7	5	[4	3]	2	1	
8.	Small Class size	4.0	[5	4]	3	2	1	
9.	Extensive follow-up services	3.8	5	[4	3]	2	1	
10.	Students capable in two languages	3.4	5	[4	3]	2	1	
Category--Instructional Format								
11.	Materials printed in two languages	3.6	[5	4	3]	2	1	
12.	Emphasize communication skills	4.5	[5	4]	3	2	1	
13.	E.S.L. component	3.8	5	[4	3]	2	1	
14.	Job survival component	4.2	[5	4]	3	2	1	
15.	Utilize simulation approach	3.9	[5	4	3]	2	1	

		MEAN SCORE	YOUR PREVIOUS CHOICE ○ MAJORITY RANGE [ ] SA	A	U	D	SD	COMMENTS
Category--Instructional Format (cont.)								
16.	Utilize "hands-on" approach	4.5	[5	4]	3	2	1	
17.	Students mainstreamed	3.6	5	[4	3]	2	1	
18.	Equipment/materials have "no language" aspect	2.9	5	[4	3]	2	1	
19.	Local social/cultural aspects given consideration	3.9	5	[4]	3	2	1	
Category--Administration								
20.	Open entry	4.2	[5	4]	3	2	1	
21.	Open exit	4.3	[5	4]	3	2	1	
22.	Pre-assessment of realistic expectation of employment	4.3	[5	4]	3	2	1	
23.	Job placement services	4.2	[5	4]	3	2	1	
24.	Strong cooperative component	4.2	[5	4]	3	2	1	
25.	Student support component	4.3	[5	4]	3	2	1	
26.	Advisory committee	4.2	[5	4	3]	2	1	
27.	Open night/dat/weekends	3.6	5	[4	3]	2	1	
28.	Free or minimal cost	3.4	[5	4	3]	2	1	
29.	Good publicity program	4.1	[5	4]	3	2	1	

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II. What educational support services (student, program, administrative, etc.) are needed for bilingual vocational programs that are not needed for traditional programs?

	All materials in two languages	3.9	5	[4	3]	2	1	
2.	All materials in "non-English"	2.4	5	4	[3	2	1]	
3.	E.S.L. teachers/language instruction	3.9	5	[4	3]	2	1	
4.	Bilingual, professional counseling	4.3	[5	4]	3	2	1	
5.	Parent/family liaison workers	3.6	5	[4	3]	2	1	
6.	Same as traditional programs	2.9	5	[4	3	2]	1	
7.	Financial aid available	4.0	5	[4]	3	2	1	
8.	Child care services	3.9	[5	4	3]	2	1	
9.	Income maintenance	3.6	5	[4	3]	2	1	
10.	Housing assistance	3.7	5	[4	3]	2	1	
11.	Relocation assistance	3.4	5	[4	3]	2	1	
12.	Bilingual tutorial services	4.2	5	[4]	3	2	1	
13.	Minority extraction instructors	4.0	5	[4]	3	2	1	
14.	In-service program for staff	4.6	5	[4]	3	2	1	

II. (cont.)

		MEAN SCORE	YOUR PREVIOUS CHOICE ○ MAJORITY RANGE [ ] SA	A	U	D	SD	COMMENTS
15.	Bilingual interpreter	4.1	[5	4]	3	2	1	
16.	Transportation for students	3.8	5	[4	3]	2	1	
17.	Teacher aids	3.6	5	[4	3]	2	1	
18.	Phone in reservations	2.5	5	4	[3	2]	1	
19.	Assistance in completing forms	3.9	5	[4]	3	2	1	
20	Language testing	4.0	5	[4	3]	2	1	

III. What type of delivery systems will best meet the needs for bilingual vocational education programs?

1.	Same as all vocational programs	3.2	5	[4	3	2]	1	
2.	Bilingual instructors	4.1	[5	4]	3	2	1	
3.	Individualized instruction	4.3	[5	4]	3	2	1	
4.	Systems for job survival skills	4.6	[5	4]	3	2	1	
5.	Tutorial services	4.4	[5	4	3]	2	1	
6.	Community based "real world" experiences	4.5	[5	4]	3	2	1	
7.	Involvement/commitment by local business/community	4.3	[5	4]	3	2	1	
8.	Competency based exit	4.4	[5	4]	3	2	1	
9.	Students contract for "X" competencies	3.8	5	[4	3]	2	1	
10.	Job placement program	4.4	[5	4]	3	2	1	
11.	Help with communication skills	4.6	[5	4]	3	2	1	
12.	Parent involvement	3.9	5	[4]	3	2	1	
13.	Take program to people	4.1	[5	4]	3	2	1	
14.	Support students' self-esteem/pride	4.5	[5	4]	3	2	1	
15.	Support learning with local culture	4.2	[5	4]	3	2	1	

IV. What are the major factors one should consider in determining the need for a bilingual vocational program?

1.	Students available who could profit from program	4.6	[5	4]	3	2	1	
2.	Jobs for students	4.7	[5	4]	3	2	1	
3.	Bilingual instructors	4.0	5	[4	3]	2	1	
4.	Attitudes of local employers	4.2	5	[4]	3	2	1	
5.	Attitudes of school staff and teachers	4.3	[5	4]	3	2	1	
6.	Culture differences	3.9	[5	4	3]	2	1	

IV. (cont.)

		MEAN SCORE	YOUR PREVIOUS CHOICE ○ MAJORITY RANGE [ ] SA	A	U	D	SD	COMMENTS
7.	Mobility of students	4.1	5	[4]	3	2	1	
8.	Do other bilingual programs exist	3.8	[5	4	3]	2	1	
9.	Drop-out rate	3.6	5	[4	3]	2	1	
10.	Assess student needs	4.5	[5	4]	3	2	1	

V. In what Colorado vocational education programs or occupational training programs will bilingual education need to be implemented in the next five years?

1.	Agriculture	3.8	[5	4	3]	2	1	
2.	Building trades	4.4	[5	4]	3	2	1	
3.	Auto mechanics	3.7	5	[4	3]	2	1	
4.	Auto body work	3.8	5	[4	3]	2	1	
5.	Oil/energy development	4.6	[5	4]	3	2	1	
6.	Any special localized need	3.8	5	[4	3]	2	1	
7.	Indo-Chinese programs	3.4	5	[4	3]	2	1	
8.	Data systems	3.9	[5	4	3]	2	1	
9.	Health/medical careers	4.4	[5	4]	3	2	1	
10.	Recreation	4.1	[5	4]	3	2	1	
11.	Hospitality/food careers	4.4	[5	4]	3	2	1	
12.	I & I	4.2	[5	4]	3	2	1	
13.	Business office education	4.1	[5	4]	3	2	1	
14.	Home economics	3.6	5	[4	3]	2	1	
15.	Legal aids	3.9	[5	4	3]	2	1	
16.	Geriatric aids	4.1	[5	4]	3	2	1	
17.	Transportation specialists	3.6	5	[4	3]	2	1	
18.	Environmental assessment	3.7	5	[4	3]	2	1	
19.	Prepare students for life, not specific jobs	2.8	5	[4	3	2	1]	

VI. What types of jobs requiring bilingual skills do you think will be available in the next two years?

1.	Heavy equipment maintenance	3.7	5	[4	3]	2	1	
2.	Agricultural	3.6	5	[4	3]	2	1	
3.	Bilingual teaching	4.1	[5	4]	3	2	1	
4.	Oil industry technicians	4.2	[5	4]	3	2	1	

VI. (cont.)

		MEAN SCORE	YOUR PREVIOUS CHOICE ○ MAJORITY RANGE [ ] SA	A	U	D	SD	COMMENTS
5.	Immigration/customs	3.8	5	[4 - 3]		2	1	
6.	Cultural awareness	3.1	5	[4 - 3]		2	1	
7.	Office jobs/secretarial	3.9	5	[4 - 3]		2	1	
8.	Service jobs (clerical, sales, marketing)	3.9	5	[4 - 3]		2	1	
9.	Energy-related/coal, uranium	4.3	[5 - 4]		3	2	1	
10.	Health/social services	4.3	[5 - 4]		3	2	1	
11.	Travel/airport	4.0	[5 - 4]		3	2	1	
12.	Social services	4.0	[5 - 4 - 3]			2	1	
13.	Counseling	3.8	5	[4 - 3]		2	1	
14.	Municipal government	3.5	5	[4 - 3]		2	1	
15.	Teaching	3.7	5	[4 - 3]		2	1	
16.	Foreman/supervisor	3.9	5	[4]	3	2	1	
17.	Interpreters	4.0	5	[4 - 3]		2	1	
18.	Computer programming/data processing	3.7	5	[4 - 3]		2	1	
19.	Accounting/banking	3.6	5	[4 - 3]		2	1	
20.	Electronics	4.0	[5 - 4 - 3]			2	1	
21.	Telephone operators	3.3	5	[4 - 3 - 2]			1	
22.	Transportation	3.9	5	[4 - 3]		2	1	
23.	Electro/mechanical	3.5	5	[4 - 3]		2	1	
24.	Plumbing/steam fitting	3.5	5	[4 - 3]		2	1	
25.	Psychology	3.1	5	[4 - 3 - 2]			1	
26.	Recreation	3.6	5	[4 - 3]		2	1	
27.	Welding	3.6	5	[4 - 3]		2	1	
28.	Soil conservation	3.1	5	[4 - 3 - 2]			1	
29.	Mining	4.0	[5 - 4]		3	2	1	

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APPENDIX B

Program Survey

Directions: Please respond to each question; add any written comments that help clarify your responses.

1) Type of agency (check all that apply)
_____ CETA Prime Sponsor
_____ Area Vocational School
_____ Proprietary School
_____ Community College
_____ Local School District

2) From your perspective, check those descriptors that best describe bilingual vocational education programs. (Check all that apply)
_____a. Instruction is provided in two or more languages
_____b. Curriculum and textbooks are in two or more languages
_____c. Students are required to take a second language
_____d. Students are placed in a job requiring bilingualism
_____e. Students that are not proficient in English are given special instruction in English (special needs programs)
_____f. Tutors for students
_____g. Interpreter for classroom instruction
_____h. Others _____
(Specify)

3) What types of students are primarily attracted to bilingual programs? (Check all that apply)
_____a. Students that speak only English
_____b. Students with English as a second language
_____c. Students that speak two languages well
_____d. Students that are NOT English speaking

4) What are three major barriers to implementing bilingual vocational education programs?

_____

_____

_____

5) Have you identified the need or lack of need for bilingual vocational programs? Yes_____ No_____

If Yes: How?_____

_____

_____

6) Do you offer programs in bilingual vocational education? Yes____ No____

If Yes: Indicate a) the program area(s) impacted and b) specify the occupational area (e.g., Industrial Electronics, Hotel Management, Farm Management, etc.)

a) Program Area	b) Occupational Area
____ Agricultural	_____
____ Trade & Industrial	_____
____ Distributive Educ.	_____
____ Business & Office Educ.	_____
____ Technical	_____
____ Health	_____
____ Home Economics	_____
Others _____ (Specify)	_____

7) In what types of jobs are graduates from bilingual programs placed?

_____

_____

_____

8) What types of student services are needed to support bilingual vocational programs?

_____

_____

_____

9) What types of programs attract bilingual students?

_____

_____

_____

10) In what ways are students in bilingual programs followed up?

_____

_____

_____

11) Should bilingual vocational programs provide training for:

_____ entry level jobs
_____ upward mobility
_____ both

12) List one bilingual vocational program, currently in operation in the state, you think is exemplary. _____
(Program Name)

_____
(Location) (Contact Person)

Please enclose any promotional materials used for your bilingual programs.